UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:
2002/01399

May 23, 2003

Mr. Lawrence Evans
U.S. Army Corps of Engineers, Portland District
ATTN: Mary Headley
P.O. Box 2946
Portland, OR 97208-2946

Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation on the McCormick Pier Repair Project, Willamette River Mile 11.3, Multnomah County, Oregon (Corps No. 200200853)

Dear Mr. Evans:

Enclosed is a biological opinion (Opinion) pursuant to section 7 of the Endangered Species Act (ESA) prepared by NOAA's National Marine Fisheries Service (NOAA Fisheries), on the effects of the proposed McCormick Pier Repair Project by MC Realty Advisors, LLC at Willamette River Mile 11.3 in Multnomah County, Oregon. In this Opinion, NOAA Fisheries concludes that the proposed action is not likely to jeopardize the continued existence of ESA-listed Lower Columbia River and Upper Willamette River chinook salmon (*Oncorhynchus tshawytscha*), Lower Columbia River and Upper Willamette River steelhead (*O. mykiss*). As required by section 7 of the ESA, NOAA Fisheries includes reasonable and prudent measures with non-discretionary terms and conditions that NOAA Fisheries believes are necessary to minimize the impact of incidental take associated with this action.

This document also serves as consultation on essential fish habitat pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act and its implementing regulations at 50 CFR Part 600.

If you have any questions regarding this consultation, please contact Christy Fellas of my staff in the Oregon Habitat Branch at 503.231.2307.

Sincerely,

For Michael R Course

D. Robert Lohn
Regional Administrator

Endangered Species Act - Section 7 Consultation
Biological Opinion

&

Magnuson-Stevens Fishery Conservation and Management Act
Essential Fish Habitat Consultation

McCormick Pier Repair Project,
Willamette River Mile 11.3, Multnomah County, Oregon
Corps No. 200200853

Agency:	U.S. Army Corps of Engineers
Consultation Conducted By:	NOAA's National Marine Fisheries Service, Northwest Region
Date Issued:	May 23, 2003
Issued by:	for Michael R Course D. Robert Lohn Regional Administrator
Refer to:	**2002/01399**

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1. INTRODUCTION

1.1 Consultation History

On December 2, 2002, NOAA's National Marine Fisheries Service (NOAA Fisheries) received a request from the Corps of Engineers (COE) for Endangered Species Act (ESA) section 7 formal consultation for the McCormick Pier Repair Project at Willamette River Mile 11.3 in Multnomah County, Oregon. Subsequently, NOAA Fisheries requested a meeting to discuss alternatives for dock materials. The meeting was held on March 19, 2003. Revised project information was received on April 9, 2003. Formal consultation under the ESA and the Magnuson-Stevens Fishery Management and Conservation Act (MSA) was initiated on April 9, 2003, for the proposed project. The COE determined that Lower Columbia River (LCR) and Upper Willamette River (UWR) chinook salmon (*Oncorhynchus tshawytscha*) and LCR and UWR steelhead (*O. mykiss*) are likely to be adversely affected (LAA) by the proposed project. This document is based on the information presented in the BA and discussions with the COE, the applicant and project consulting firms.

This biological opinion (Opinion) considers the potential effects of the proposed action on species in Table 1. The objective of this consultation is to determine whether the proposed action is likely to jeopardize the continued existence of the four listed ESUs of Columbia River basin salmonids described above, or destroy or adversely modify their critical habitats, and to explain why NOAA Fisheries believes the proposed action will adversely effect essential fish habitat (EFH).

Table 1. References for Additional Background on Listing Status, Biological Information, Protective Regulations, and Critical Habitat Elements for the ESA-Listed Species Considered in this Consultation

Species ESU	Status	Protective Regulations	Biological Information, Historical Population Trends
Chinook salmon (*O. Tshawytscha*)			
Lower Columbia River	T 3/24/99; 64 FR 14308	7/10/00; 65 FR 42422	Myers *et al.*1998; Healey 1991
Upper Willamette River	T 3/24/99; 64 FR 14308	7/10/00; 65 FR 42422	Myers *et al.*1998; Healey 1991
Steelhead (*O. mykiss*)			
Lower Columbia River	T 3/19/98; 63 FR 13347	7/10/00; 65 FR 42422	Busby *et al.* 1995; 1996
Upper Willamette River	T 3/25/99; 64 FR 14517	7/10/00; 65 FR 42422	Busby *et al.* 1995; 1996

1.2 Proposed Action

The applicant proposed to repair or replace deteriorated parts of existing pier structures at Willamette River mile 11.3, in downtown Portland, Oregon. The 310-foot long pier supports two buildings in their entirety, and portions of two additional buildings. The original pier was constructed in the late 1800's with major reconstruction and repairs occurring in the 1930's and again in 1980, when the apartment buildings were constructed on the pier. Routine maintenance of the pier was required as part of a City of Portland permit, but maintenance was never completed. The proposed action includes repairs to the existing pier to address structural and safety concerns.

The proposed action includes the following items:

- Repair cracks and breaks in a concrete support wall with cementitious grout and concrete;
- Remove existing abandoned, untreated piles;
- Repair an existing bulkhead retaining wall under the pier and fill portions of missing backfill;
- Reroute existing roof drain pipes to avoid releasing water onto the pier/deck structure;
- Replace existing creosote piling with a combination of new steel and ACZA-treated pilings;
- Replace untreated timber beams with new untreated beams (with the exception of the eastern edge of the pier, which will be replaced with ACZA-treated beams);
- Replace 150 existing creosote posts with new ACZA-treated and steel posts (82 of these are below ordinary high water and will be replaced with mostly steel posts, and 20 or less may be replaced with ACZA-treated wood); and
- Replace approximately 180 existing untreated cross braces with new ACZA-treated braces or steel, minimizing use of treated wood as fitting issues allow.

Steel will be used where feasible. Due to fitting problems with the existing structure, steel may not be used in areas where it will not provide proper structural support. Work will be done in the in-water work windows of July 1 - October 31 and December 1 - January 31. Construction will be done from the bank and from a spud barge with a crane directly in front of the pier on the Willamette River. Waste and stockpiles of equipment and supplies will be held on the barge or at an upland site.

2. ENDANGERED SPECIES ACT

2.1 Biological Opinion

2.1.1 Biological Information

The action area is defined by NOAA Fisheries regulations (50 CFR 402) as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved

in the action." The action area is the Willamette River adjacent to the work area and downstream to the limit of visible turbidity.

Essential habitat features for salmonids are: Substrate, water quality, water quantity, water temperature, water velocity, cover/shelter, food (juvenile only), riparian vegetation, space, and safe passage conditions. The proposed action may affect the essential habitat feature of water quality. The Willamette River within the action area serves as a rearing and migration area for listed salmonids.

According to a recent draft of "Preliminary conclusions regarding the updated status of listed ESUs of West Coast salmon and steelhead,"drafted by the West Coast Salmon Biological Review Team (BRT), a number of ESUs were concluded by the majority of the BRT "likely to become endangered in the foreseeable future", including: Lower Columbia River chinook, Upper Willamette River chinook, Lower Columbia River steelhead and Upper Willamette River steelhead (NMFS 2003). Preliminary conclusions for each listed ESU considered in this Opinion are discussed below.

Lower Columbia River Chinook

Natural origin fish had parents that spawned in the wild as opposed to hatchery origin fish whose parents were spawned in a hatchery. The abundance of natural origin spawners range from completely extirpated for most of the spring-run populations, to over 6,500 for the Lewis River bright population. The majority of the fall-run tule populations have a substantial fraction of hatchery origin spawners in the spawning areas and are hypothesized to be sustained largely by hatchery production. Exceptions are the Coweeman and Sandy River fall-run populations which have few hatchery fish spawning on the natural spawning areas. These populations have recent mean abundance estimates of 348 and 183 spawners, respectively. The majority of the spring-run populations have been extirpated largely as the result of dams blocking access to their high elevation habitat. The two bright chinook populations (*i.e.,* Lewis and Sandy) have relatively high abundances, particularly the Lewis.

In many cases, data were not available to distinguish between natural and hatchery origin spawners, so only total spawner (or dam count) information is presented. This type of figure can give a sense of the levels of abundance, overall trend, patterns of variability, and the fraction of hatchery origin spawners. A high fraction of hatchery origin spawners indicates that the population may potentially be sustained by hatchery production and not the natural environment. It is important to note that estimates of the fraction of hatchery origin fish are highly uncertain since the hatchery marking rate for LCR fall chinook is generally only a few percent and expansion to population hatchery fraction is based on only a handful of recovered marked fish.

Upper Willamette River Chinook

All spring chinook in the ESU, except those entering the Clackamas River, must pass Willamette Falls. There is no assessment of the ratio of hatchery-origin to wild-origin chinook passing the falls, but the majority of fish are undoubtedly of hatchery origin. (Natural origin fish

are defined as has having had parents that spawned in the wild as opposed to hatchery origin fish whose parents spawned in a hatchery). Individual populations' status is discussed below. No formal trend analyses were conducted on any of the UW chinook populations. The two populations with long time series of abundance (Clackamas and McKenzie), have insufficient information on the fraction of hatchery-origin spawners to permit a meaningful analysis.

An analysis was conducted by Steel and Sheer (2002) to assess the number of stream kilometers (km) historically and currently available to salmon populations in the Upper Willamette. Stream km usable by salmon are determined based on simple gradient cut-offs and on the presence of impassable barriers. This approach will over-estimate the number of usable stream km, as it does not take into consideration habitat quality (other than gradient). However, the analysis does indicate that for some populations, the number of stream habitat km currently accessible is significantly reduced from the historical condition.

A large number of spring chinook are released in the Upper Willamette River as mitigation for the loss of habitat above Federal hydroprojects. This hatchery production is considered a potential risk, because it masks the productivity of natural population. Interbreeding of hatchery and natural fish poses potential genetic risks and the incidental take from the fishery promoted by the hatchery production can increase adult mortality. Harvest retention is only allowed for hatchery-marked fish, but take from hooking mortality and non-compliance is still a potential issue.

Lower Columbia River Steelhead

Based on the updated information provided in this report, the information contained in previous LCR status reviews, and preliminary analyses, the number of historical and currently viable populations have been tentatively identified. This summary indicates some of the uncertainty about this ESU. Like the previous BRT, the current BRT could not conclusively identify a single population that is naturally self-sustaining. Over the period of the available time series, most of the populations are in decline and are at relatively low abundance (no population has recent mean greater than 750 spawners). In addition, many of the populations continue to have a substantial fraction of hatchery origin spawners and may not be naturally self-sustaining.

Upper Willamette River Steelhead

All steelhead in this ESU must pass Willamette Falls. Two groups of winter steelhead currently exist in the Upper Willamette River. The "late-run" winter steelhead exhibit the historical phenotype adapted to passing the seasonal barrier at Willamette Falls. The falls were laddered and hatchery "early-run" winter steelhead fish were released above the falls. The early-run fish were derived from Columbia Basin steelhead outside the Willamette River, and are considered non-native. The release of winter-run hatchery steelhead has recently been discontinued, but some early-run winter steelhead are still returning from the earlier hatchery releases and from whatever natural production of the early-run fish that has been established. Non-native summer-run hatchery steelhead are also released into the Upper Willamette River. There are currently no estimates of the absolute total numbers of spawners in the individual populations.

As in the LCR steelhead ESU, the BRT could not conclusively identify a single population that is naturally self-sustaining. All populations are relatively small, with the recent mean abundance of the entire ESU at less than 6,000. Over the period of the available time series, most of the populations are in decline. The recent elimination of the winter-run hatchery production will allow estimation of the natural productivity of the populations in the future, but the available time series are confounded by the presence of hatchery-origin spawners. On a positive note, the counts all indicate an increase in abundance in 2001, likely at least partly as a result of improved marine conditions.

2.1.2 Evaluating Proposed Actions

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 CFR Part 402. NOAA Fisheries must determine whether the action is likely to jeopardize the listed species and/or whether the action is likely to destroy or adversely modify critical habitat. This analysis involves the initial steps of: (1) Defining the biological requirements and current status of the listed species, and (2) evaluating the relevance of the environmental baseline to the species' current status.

Subsequently, NOAA Fisheries evaluates whether the action is likely to jeopardize the listed species by determining if the species can be expected to survive with an adequate potential for recovery. In making this determination, NOAA Fisheries must consider the estimated level of mortality attributable to: (1) Collective effects of the proposed or continuing action; (2) the environmental baseline; and (3) any cumulative effects. If NOAA Fisheries finds that the action is likely to jeopardize the listed species, NOAA Fisheries must identify reasonable and prudent alternatives for the action.

For the proposed action, NOAA Fisheries' jeopardy analysis considers direct or indirect mortality of fish attributable to the action. NOAA Fisheries' analysis considers the extent to which the proposed action impairs the function of essential elements necessary for migration, spawning, and rearing of listed species under the existing environmental baseline.

2.1.2.1 Biological Requirements

The first step in the methods NOAA Fisheries uses for applying the ESA section 7(a)(2) to listed salmonids is to define the species' biological requirements that are most relevant to each consultation. NOAA Fisheries also considers the current status of the listed species, taking into account population size, trends, distribution and genetic diversity. To assess the current status of the listed species, NOAA Fisheries starts with the determinations made in its decision to list the species for ESA protection and also considers new data available that is relevant to the determination.

The relevant biological requirements are those necessary for the listed species to survive and recover to a naturally-reproducing population level, at which time protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance its capacity to adapt to various environmental conditions, and allow it to become self-sustaining in the natural environment.

For this consultation, the biological requirements are improved habitat characteristics that function to support successful rearing and migration. The current status of the listed species, based upon their risk of extinction, has not significantly improved since the species were listed.

2.1.2.2 Environmental Baseline

The Willamette River watershed covers a vast area (29,785 square kilometers) bordered on the east and west by the Cascades and the Pacific coast ranges. It drains from as far south as Cottage Grove and flows north to its confluence with the Columbia River. The Willamette River watershed is the largest river basin in Oregon. It is home to most of the state's population, its largest cities, and many major industries. The watershed also contains some of Oregon's most productive agricultural lands and supports important fishery resources (City of Portland 2001).

The uplands (Coast and Cascade Ranges) receive about 80% of the precipitation falling on the Willamette River basin, and store much of this water as snow. Ecosystem productivity in these upland streams is relatively low, with aquatic insects gleaning much of their diet from material that falls into running water. In larger, slower tributaries, more plant material is produced in the stream itself. The mainstem supports a highly productive algal community that blooms as temperatures rise in the summer. Insects and some vertebrates feed on these plants, and many vertebrates, including salmonids, feed on stream-dwelling insects. Much of the habitat for Willamette River salmonids has been degraded by various land use practices or eliminated by dams. Wild salmonid populations have declined precipitously over the last century in the Willamette River (WRI 1999).

Significant changes have occurred in the watershed since the arrival of Europeans in the 1800s. The watershed was mostly forested land before the arrival of white settlers. Now, about half the basin is still forested. One-third of the basin is used for agriculture, and about 5% is urbanized or is in residential use. The river receives direct inputs from treated municipal wastes and industrial effluents. Non-point-source input from agricultural, silvicultural, residential, urban and industrial land uses are also significant, especially during rainfall runoff.

Willamette River miles 3.5 to 9.5 are currently being investigated for contaminated sediments and are pending decisions on how to proceed with cleanup efforts. This area is being investigated through the Environmental Protection Agency's Superfund Program for hazardous sites. The proposed project is near downtown Portland and surrounded by a variety of commercial and industrial sites. Currently the project area provides little or no riparian vegetation, off-channel habitat, high flow refugia, or habitat complexity for use by listed salmonids, and most ESUs utilizing this area for rearing and migration continue to experience a declining trend.

2.1.3 Analysis of Effects

2.1.3.1 Effects of the Proposed Action

Sediment and Water Quality Contamination from Treated Wood

The existing pier is constructed mostly of creosote treated wood and several pilings, beams and braces will be replaced with ACZA-treated wood. Sediments in the action area are likely contaminated with elevated concentrations of copper and PAHs, and probably many other creosote components. Replacement of treated wood components of the pier and repairing retaining walls may adversely affect listed salmonids due to resuspension of contaminated sediments into the Willamette River.

Migration of creosote and its components (*e.g.* copper and PAHs) from treated wood in lotic environments may adversely affect juvenile salmonid fishes (NMFS 1998). Copper is the main metal of concern because it is the most acutely toxic. Copper also leaches the most readily, followed by arsenic and chromium (Warner and Solomon 1990). Creosote contains over 300 compounds, including a variety of PAHs. Some PAHs are very toxic and bioconcentrate (NMFS 1998). Potential effects of elevated water column and sediments concentrations of copper and PAHs to listed salmonids include, but are not limited to: (1)Reduced growth and survival rates; (2) altered hematology; and (3) reproductive effects, including reduced frequency of spawning, reduced egg production, and increased deformities in fry (Sorensen 1991, Eisler 1998).

Approximately 20 or less of the 82 pilings replaced below ordinary high water will be ACZA-treated wood. The remainder will be steel piles, to reduce the effects of leachates on listed species. Where feasible, steel will also be used in place of treated wood for cross braces. The use of steel instead of treated wood would reduce direct leaching of toxic substances known to adversely effect salmonid fishes.

Chemical Contamination from Construction

As with all construction activities, accidental release of fuel, oil, and other contaminants may occur. Operation of the back-hoes, excavators, and other equipment requires the use of fuel, lubricants, *etc.*, which, if spilled into the channel of a water body or into the adjacent riparian zone, can injure or kill aquatic organisms. Petroleum-based contaminants (such as fuel, oil, and some hydraulic fluids) contain poly-cyclic aromatic hydrocarbons (PAHs), which can be acutely toxic to salmonids at high levels of exposure and can also cause chronic lethal and acute and chronic sublethal effects to aquatic organisms (Neff 1985). Similarly, exposure to herbicides can have lethal and sublethal effects on salmonids, aquatic invertebrates, aquatic vegetation, and target and non-target riparian vegetation (Spence *et al.* 1996).

To minimize the potential for chemical contamination and disturbance of fish, in-water work will occur during the preferred in-water work window of July 1 through October 31. During this window, streamflow is typically low and rainfall is minimal.

2.1.3.2 Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as those effects of "future State or private activities, not involving federal activities, that are reasonably certain to occur within the action area of the federal action subject to consultation." Future Federal actions, including the ongoing operation of hydropower systems, hatcheries, fisheries, and land management activities are being (or have been) reviewed through separate section 7 consultation processes. Therefore, these actions are not considered cumulative to the proposed action.

NOAA Fisheries is not aware of any specific future non-Federal activities within the action area that would cause greater impacts to listed species than presently occurs. NOAA Fisheries assumes that future private and state actions will continue at similar intensities as in recent years.

2.1.4 Conclusion

NOAA Fisheries has determined that, based on the available information, the proposed action is not likely to jeopardize the continued existence of LCR or UWR chinook salmon or LCR or UWR steelhead. NOAA Fisheries used the best available scientific and commercial data to analyze the effects of the proposed action on the biological requirements of the species relative to the environmental baseline, together with cumulative effects. NOAA Fisheries applied its evaluation methodology (NMFS 1996) to the proposed action and found that it could cause slight degradation of anadromous salmonid habitat due to decreased water quality. Furthermore, NOAA Fisheries expects that construction related effects could alter normal feeding and sheltering behavior of juvenile salmon should any be present in the action area during the proposed action. These effects will be temporary.

Our conclusions are based on the following considerations: (1) The work will occur during the in-water work window of July 1 through October 31; (2) any increases in sedimentation and turbidity to the reaches of the Willamette River will be short-term and minor in scale, and will not change or worsen existing conditions for stream substrate in the action area; (3) steel will be used where feasible to decrease effects of leachates from treated wood; and (4) the proposed action is not likely to impair properly functioning habitat, appreciably reduce the functioning of already impaired habitat, or retard the long-term progress of impaired habitat toward proper functioning condition essential to the long-term survival and recovery at the population or ESU scale.

2.1.5 Reinitiation of Consultation

Consultation must be reinitiated if: (1) The amount or extent of taking specified in the incidental take statement is exceeded, or is expected to be exceeded; (2) new information reveals that effects of the action may affect listed species in a way not previously considered; (3) the action is modified in a way that causes an effect on listed species that was not previously considered; or (4) a new species is listed or critical habitat is designated that may be affected by the action (50 CFR 402.16). If the COE fails to provide specified monitoring information by

the required date, NOAA Fisheries will consider that a modification of the action that causes an effect on listed species not previously considered, and would cause this Opinion to expire.

2.2 Incidental Take Statement

Section 9 and rules promulgated under section 4(d) of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, and sheltering. "Harass" is defined as action that create the likelihood of injuring listed species by annoying it to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. "Incidental take" is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

An incidental take statement specifies the impact of any incidental taking of threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the action agency must comply to implement the reasonable and prudent measures.

2.2.1 Amount or Extent of the Take

NOAA Fisheries anticipates that the actions covered by this Opinion are reasonably certain to result in incidental take of LCR and UWR chinook salmon and LCR and UWR steelhead because of potential adverse effects from chemical contamination, and the potential for direct incidental take during in-water work. The potential adverse effects of the these project components on population levels are largely unquantifiable, and NOAA Fisheries does not expect them to be measurable in the long term. The extent of authorized take is limited to UWR chinook salmon in the Willamette River, and is limited to that caused by the proposed action within the action area.

2.2.2 Reasonable and Prudent Measures

The measures described below are non-discretionary. They must be implemented so that they become binding conditions in order for the exemption in section 7(a)(2) to apply. The COE has the continuing duty to regulate the activities covered in this incidental take statement. If the COE fails to require the contractor to adhere to the terms and conditions of the incidental take statement through enforceable terms added to the document authorizing this action, or fails to retain the oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(a)(2) may lapse.

NOAA Fisheries believes that the following reasonable and prudent measures are necessary and appropriate to minimize take of the above species. The COE shall:

1. Minimize incidental take from general construction by excluding unauthorized permit actions and applying permit conditions that avoid or minimize adverse effects to riparian and aquatic systems.

2. Ensure completion of a comprehensive monitoring and reporting program to confirm this Opinion is meeting its objective of minimizing take from permitted activities

2.2.3 Terms and Conditions

To be exempt from the prohibitions of section 9 of the ESA, FHWA must comply with the following terms and conditions, which implement the reasonable and prudent measures described above for each category of activity.

1. To implement reasonable and prudent measure #1 (general conditions for construction, operation and maintenance), the Corps shall ensure that:

    a. Timing of in-water work. Work within the active channel will be completed during the period of May 1 to October 31. All work must be completed by this date unless otherwise approved in writing by NOAA Fisheries.
    b. Cessation of work. Project operations will cease under high flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize resource damage.
    c. Pollution and Erosion Control Plan. A pollution and erosion control plan will be prepared and carried out to prevent pollution related to construction operations. The plan must be available for inspection on request by Corps or NOAA Fisheries.
        i. Plan Contents. The pollution and erosion control plan must contain the pertinent elements listed below, and meet requirements of all applicable laws and regulations.
            (1) Practices to prevent erosion and sedimentation associated with access roads, stream crossings, construction sites, borrow pit operations, haul roads, equipment and material storage sites, fueling operations, and staging areas.
            (2) Practices to confine, remove, and dispose of excess concrete, cement and other mortars or bonding agents, including measures for washout facilities.
            (3) A description of any hazardous products or materials that will be used for the project, including procedures for inventory, storage, handling, and monitoring.
            (4) A spill containment and control plan with notification procedures, specific clean up and disposal instructions for different products, quick response containment and clean up measures that will be

available on the site, proposed methods for disposal of spilled materials, and employee training for spill containment.

(5) Practices to prevent construction debris from dropping into any stream or water body, and to remove any material that does drop with a minimum disturbance to the streambed and water quality.

d. Construction discharge water. All discharge water created by construction (*e.g.* concrete washout, pumping for work area isolation, vehicle wash water) will be treated as follows:

i. Water quality. Facilities must be designed, built and maintained to collect and treat all construction discharge water using the best available technology applicable to site conditions. The treatment must remove debris, nutrients, sediment, petroleum hydrocarbons, metals, and other pollutants likely to be present.

ii. Discharge velocity. If construction discharge water is released using an outfall or diffuser port, velocities must not exceed four feet per second.

iii. Spawning areas, marine submerged vegetation. No construction discharge water may be released within 300 feet upstream of active spawning areas or areas with marine submerged vegetation.

e. Treated wood. Projects that require removal of treated wood will use the following precautions:

i. Treated wood debris. Care must be taken to ensure that no treated wood debris falls into the water. If treated wood debris does fall into the water, it must be removed immediately.

ii. Disposal of treated wood debris. All treated wood removed during a project must be disposed of at a facility approved for hazardous materials of this classification.

iii. Piling removal. Remove pilings as follows.

(1) Dislodge the piling with a vibratory hammer.

(2) Once loose, place the piling onto the construction barge or other appropriate dry storage site.

(3) If a treated wood piling breaks during removal, either remove the stump by breaking or cutting three feet below the sediment surface or push the stump in to that depth, then cover it with a cap of clean substrate appropriate for the site.

(4) Fill the holes left by each piling with clean, native sediments, whenever feasible.

f. Heavy Equipment. Use of heavy equipment will be restricted as follows:

i. Choice of equipment. When heavy equipment must be used, the equipment selected must have the least adverse effects on the environment (*e.g.* minimally-sized, rubber-tired).

ii. Vehicle staging. Vehicles must be fueled, operated, maintained and stored as follows:

(1) Vehicle staging, cleaning, maintenance, refueling, and fuel storage must take place in a vehicle staging area placed 150 feet or more from any stream, water body or wetland.

(2) All vehicles operated within 150 feet of any stream, water body or wetland must be inspected daily for fluid leaks before leaving the vehicle staging area. Any leaks detected must be repaired in the vehicle staging area before the vehicle resumes operation. Inspections must be documented in a record that is available for review on request by COE or NOAA Fisheries.

(3) All equipment operated instream must be cleaned before beginning operations below the bankfull elevation to remove all external oil, grease, dirt, and mud.

iii. Stationary power equipment. Stationary power equipment (*e.g.* generators, cranes) operated within 150 feet of any stream, water body or wetland must be diapered to prevent leaks, unless otherwise approved in writing by NOAA Fisheries.

2. To implement reasonable and prudent measure #2 (monitoring), the COE shall:

a. Implementation monitoring. Ensure that the permittee submits a monitoring report to the COE within 120 days of project completion describing the permittee's success meeting permit conditions. The monitoring report will include the following information:

i. Project identification

(1) Permittee name, permit number, and project name.

(2) Project location, including any compensatory mitigation site(s), by 5th field HUC and by latitude and longitude as determined from the appropriate USGS seven-minute quadrangle map

(3) Corps contact person.

(4) Starting and ending dates for work completed.

ii. Photo documentation. Photo of habitat conditions at the project and any compensation site(s), before, during, and after project completion.[1]

(1) Include general views and close-ups showing details of the project and project area, including pre and post construction.

(2) Label each photo with date, time, project name, photographer's name, and a comment about the subject.

iii. Pilings.

(1) Number and type of pilings removed

(2) Number of pilings (if any) that broke during removal

(3) Number and type of piling installed

(4) Description of how pilings were installed, e.g., vibratory hammer

iv. Pollution control. A summary of pollution and erosion control inspections, including any erosion control failure, hazardous material spill, and correction effort.

b. Monitoring reports will be submitted to:

[1] Relevant habitat conditions may include characteristics of channels, eroding and stable streambanks in the project area, water quality, condition of pilings removed, and other visually discernable environmental conditions at the project area.

NOAA Fisheries
Oregon Habitat Branch
Attn: 2001/01399
525 NE Oregon Street, Suite 500
Portland, OR 97232-2778

3. MAGNUSON-STEVENS FISHERY ACT

3.1 Magnuson-Stevens Fishery Management and Conservation Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), established procedures designed to identify, conserve, and enhance essential fish habitat (EFH) for those species regulated under a Federal fisheries management plan. Pursuant to the MSA:

- Federal agencies must consult with NOAA Fisheries on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH (§305(b)(2)).
- NOAA Fisheries must provide conservation recommendations for any Federal or state action that would adversely affect EFH (§305(b)(4)(A)).

- Federal agencies must provide a detailed response in writing to NOAA Fisheries within 30 days after receiving EFH conservation recommendations. The response must include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with NOAA Fisheries EFH conservation recommendations, the Federal agency must explain its reasons for not following the recommendations (§305(b)(4)(B)).

EFH means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA §3). For the purpose of interpreting this definition of EFH: "Waters" include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; "substrate" includes sediment, hard bottom, structures underlying the waters, and associated biological communities; necessary means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and "spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle (50 CFR 600.10). Adverse effect means any impact which reduces quality and/or quantity of EFH, and may include direct (*e.g.*, contamination or physical disruption), indirect (*e.g.* loss of prey or reduction in species fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810).

EFH consultation with NOAA Fisheries is required regarding any Federal agency action that may adversely affect EFH, including actions that occur outside EFH, such as certain upstream and upslope activities.

The objectives of this EFH consultation are to determine whether the proposed action would adversely affect designated EFH and to recommend conservation measures to avoid, minimize, or otherwise offset potential adverse effects to EFH.

3.2 Identification of EFH

Pursuant to the MSA the Pacific Fisheries Management Council (PFMC) has designated EFH for Federally-managed fisheries within the waters of Washington, Oregon, and California. Designated EFH for groundfish and coastal pelagic species encompasses all waters from the mean high water line, and upriver extent of saltwater intrusion in river mouths, along the coasts of Washington, Oregon and California, seaward to the boundary of the U.S. exclusive economic zone (370.4 km) (PFMC 1998a, 1998b). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other water bodies currently, or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable artificial barriers (as identified by the PFMC 1999), and longstanding, naturally-impassable barriers (*i.e.* natural waterfalls in existence for several hundred years) (PFMC 1999). In estuarine and marine areas, designated salmon EFH extends from the nearshore and tidal submerged environments within state territorial waters out to the full extent of the exclusive economic zone (370.4 km) offshore of Washington, Oregon, and California north of Point Conception to the Canadian border (PFMC 1999).

Detailed descriptions and identifications of EFH are contained in the fishery management plans for groundfish (PFMC 1998a), coastal pelagic species (PFMC 1998b), and Pacific salmon (PFMC 1999). Casillas *et al.* (1998) provides additional detail on the groundfish EFH habitat complexes. Assessment of the potential adverse effects to these species' EFH from the proposed action is based, in part, on these descriptions and on information provided by the Corps.

3.3 Proposed Action

The proposed action is detailed above in section 1.2 of this document. For the purposes of this EFH consultation, the action area is defined as the streambed, streambank and riparian corridor of the Willamette River, extending to the upstream project disturbance limits and downstream one mile below the project disturbance limits. This area has been designated as EFH for various life stages of chinook salmon and coho salmon and starry flounder (*Platyichthys stellatus*)

3.4 Effects of Proposed Action

As described in detail in section 2.1.3 of this document, the proposed activities may result in short-term adverse effects to water quality (sediment, chemical contamination). NOAA Fisheries expects short-term adverse effects from increases in turbidity and the potential for chemical contamination within the action area.

3.5 Conclusion

The proposed action will adversely affect the EFH for chinook and coho salmon.

3.6 EFH Conservation Recommendations

Pursuant to section 305(b)(4)(A) of the MSA, NOAA Fisheries is required to provide EFH conservation recommendations for any Federal or state agency action that would adversely affect EFH. The conservation measures proposed for the project by the COE, all of the reasonable and prudent measures and the terms and conditions contained in sections 2.2.2 and 2.2.3 are applicable to salmon EFH. Therefore, NOAA Fisheries incorporates each of those measures here as EFH recommendations.

3.7 Statutory Response Requirement

Please note that the MSA (section 305(b)) and 50 CFR 600.920(j) requires the Federal agency to provide a written response to NOAA Fisheries after receiving EFH conservation recommendations within 30 days of its receipt of this letter. This response must include a description of measures proposed by the agency to avoid, minimize, mitigate or offset the adverse impacts of the activity on EFH. If the response is inconsistent with a conservation recommendation from NOAA Fisheries, the agency must explain its reasons for not following the recommendation.

3.8 Supplemental Consultation

The FHWA must reinitiate EFH consultation with NOAA Fisheries if either action is substantially revised or new information becomes available that affects the basis for NOAA Fisheries' EFH conservation recommendations (50 CFR 600.920).

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